REMARKS

Introduction

- Claims 1-6 and 8-14 are pending in the application.
- Claims 1, 5, 6, 8-11, and 14 have been amended.
- Claims 1, 5, and 6 are in independent form.

Brief comment on the claim amendments

Throughout the claims, the term "TDM line *unit*" has been amended to "TDM line *board*." Support for this amendment can be found, e.g., at page 1, line 24 of the description as originally filed.[1]

In claims 1 and 6, the feature of an "encapsulation/de-encapsulation module" has been further defined as "coupled with the mapping/de-mapping module via at least one physical channel."

Similarly, in claim 5, the feature of a "high-order encapsulation/de-encapsulation module" has been further defined as "coupled with the high-order mapping/de-mapping module via at least one physical channel."

Support for these amendments can be found, for example, in claim 2 as originally filed.

In claim 6, the recitation of "*the* data service processing unit" in line 3 has been amended to "*a* data service processing unit," and the recitation of "*a* data service processing unit" in

[1]It is of course to be understood that the references to various portions of the present application are by way of illustration and example only, and that the claims are not limited by the details shown in the portions referred to.

line 7 has been amended to "*the* data service processing unit." Further, the recitations of "packet bus" in lines 8 and 18 have been amended to "*the* packet bus."

Applicant submits that no new matter has been added.

The claim objections under 37 C.F.R. 1.75

First, the Office Action suggests changing "traffic" in claim 1, line 18 to "*the* traffic." However, Applicant respectfully submits with traverse that "traffic" in claim 1, line 18 refers to traffic from the encapsulation/de-encapsulation module, and, thus, does not refer back to "traffic" recited at line 13 in claim 1.

With respect to the recitation of "packet bus" in claim 6, line 8, as stated above, in claim 6, the recitations of "packet bus" in lines 8 and 18 have been amended to "*the* packet bus."

Accordingly, withdrawal of the claim objections is respectfully requested.

The rejection under 35 U.S.C. § 112

Claims 6 and 8-13 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

The claims have been carefully reviewed and amended as deemed necessary to ensure that they conform fully to the requirements of Section 112, second paragraph, with special attention to the points raised at paragraph 3 of the Office Action. Applicant also has the following specific comments.

As stated above, Applicant has amended the recitation of "*the* data service processing unit" at line 3 in claim 6 to "*a* data service processing unit," and has amended the recitation of "*a* data service processing unit" at line 7 in claim 6 to "*the* data service processing unit."

It is believed that the rejection under 35 USC § 112 has been obviated, and its withdrawal is therefore respectfully requested.

The rejection under 35 U.S.C. § 101

Claims 1-2, 4-6, and 8-13 were rejected under 35 U.S.C. § 101. The Office Action stated that the claimed invention is directed to nonstatutory subject matter for the reasons provided at paragraph 4. Applicant respectfully requests withdrawal of this rejection.

First, in amended claim 1, the claimed subject matter is defined as an integrated cross-switching unit, which is defined as being connected with hardware devices such as a TDM (Time Division Multiplexing) line board and a data service processing unit. As stated in the description, by providing the integrated cross-switching unit of the present invention, the number of the backplane buses and the demand of system slots may be reduced. It is apparent to those skilled in the art from these recitations and descriptions that the integrated cross-switching unit is a tangible device which is coupled to hardware devices and occupies system slots on board.

Furthermore, Applicant has amended claim 1 to incorporate features of "wherein the integrated cross-switching unit comprises: a bus identification module; a cross-connecting module; a mapping/de-mapping module; an encapsulation/de-encapsulation module coupled with the mapping/de-mapping module via at least one physical channel; and a packet

scheduling module..." , and thereby amended claim 1 specifically defines the hardware constitution of the integrated cross-switching unit.

For at least the above-mentioned reasons, Applicant respectfully submits that claims 1-4 and 14 are directed towards a combination of hardware and software, rather than software *per se*, as alleged by the Examiner. The subject matter recited in claims 1-4 and 14 are apparatus claims directed to a machine, and are statutory subject matter under 35 U.S.C. § 101. Similarly, the subject matter recited in claim 5 is statutory subject matter under 35 U.S.C. § 101. Therefore, withdraw of the rejections to claims 1-4 and 14 under section 101 is respectfully requested.

In amended claim 6, the claimed subject matter is defined as a traffic scheduling method, and, furthermore, the claimed method is tied to particular machines[2] such as the TDM line board, the encapsulation/de-encapsulation module coupled with the mapping/de-mapping module via at least one physical channel, and the like.

For at least the foregoing reasons, withdraw of the rejection under Section 101 is respectfully requested.

The rejection under 35 U.S.C. § 102

Claims 1-4, 5, and 6 were rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 6,621,828 to Field, et al.

Applicant respectfully traverses this rejection.

In the Office Action, the Examiner likens the switch core 44 of Field to the integrated cross-switching unit of the present invention; further likens the switch core 44 of Field to the

[2]See *Bilski v. Kappos*, 561 US ____ (2010)

components such as the cross-connecting module, the mapping/de-mapping module, and the packet scheduling module within the integrated cross-switching unit.

From this concern, Field discusses a fused switch core 44 that performs both synchronous based switching and asynchronous based switching, but Field fails to specifically disclose the detailed internal components of the fused switch core 44, let alone the connection relations and cooperations therebetween. That is to say, Field fails to disclose the detailed limitations in claim 1 regarding the integrated cross-switching unit of the present invention.

Especially, Applicant respectfully submits that Field at least fails to disclose the "bus identification module" that "identifies a traffic source by reporting a slot number corresponding to the data service processing unit and a unit type of the data service processing unit to a control unit via the data service processing unit and by identifying the type of a bus connected with the data service processing unit as a packet bus," as recited in claim 1 of the present invention. The Examiner asserts that the disclosures in column 6, lines 34-37; column 30, lines 62-66; Figure 3 element HAS or TSB, HAS BUS or TSB BUS, element 70 or 72; column 19, lines 65-67; and column 7, lines 1-2 of Field disclose this feature. Applicant has carefully read through and considered these portions, and respectfully submits the following observations.

The Examiner likens the line card 40 of Field to the "bus identification module" of the present invention, but Field in column 6, lines 34-37 (as cited by the Examiner) only discloses that the line cards 40 perform header translation by identifying the coming virtual path identifier (VPI)/virtual channel identifier (VCI) in cells and replacing the VPI/VCI with

a cell connection identifier (CID). This portion fails to disclose the limitation of the line card 40 "identifying a traffic source by reporting a slot number corresponding to the data service processing unit and a unit type of the data service processing unit to a control unit."

The Examiner relies on the disclosure in column 30, lines 62-66 of Field. Field discloses in column 30 lines 58-66 (as cited by the Examiner): the controller 652 in the high capacity ATM switch 68, which is included in the switch core 44 (referring to column 7, lines 50-52), determines whether the cell is a TDM cell or an ATM cell and provides an address to the switching memory for storing the cell; for TDM cells, the controller 652 generates an address based on the line card 40 and HAS slot number of the cell. It may be seen that this portion cited by the Examiner is related to an operation of the controller 652, namely, the switch core 44, rather than that of the line card 40. Further, this portion only teaches determining a cell type and generating an address based on HAS slot number of the cell. It does not teach or suggest "identifying a traffic source by reporting a slot number...and a unit type to a control unit."

Similarly, the disclosure in column 19, lines 65-67, and column 7, lines 1-2 of Field as cited by the Examiner still can not cure the deficiency.

Furthermore, Applicant respectfully submits that the "slot number corresponding to the data service processing unit" as recited in claim 1 of the present invention is distinct from the "HAS slot number of the cell" as disclosed in column 30, line 63. Those skilled in the art may easily understand that a HAS slot number of a TDM cell means a time slot number. On the contrary, the slot number corresponding to the data service processing unit means a numbering of a physical system slot on board, which may be evident from the disclosure

throughout the description, for example, lines 15-27, page 12 in the description as originally filed.

In view of the above discussion, Field at least fails to disclose the feature of "the bus identification module identifies a traffic source by reporting a slot number corresponding to the data service processing unit and a unit type of the data service processing unit to a control unit via the data service processing unit and by identifying the type of a bus connected with the data service processing unit as a packet bus," as recited in claim 1 of the present invention. Thus, claim 1 is novel over Field. Based on similar reasons, independent claims 5 and 6, and dependent claims 2-4 and 8-14, are respectfully submitted to be patentable under 35 USC § 102(a).

Furthermore, claims 1-6 and 8-14 of the present invention cannot be taught or even suggested by the disclosure of Field. It is therefore respectfully submitted that claims 1-6 and 8-14 of the present invention is nonobvious over Field.

Conclusion

All of the stated grounds of rejection have been properly traversed. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the grant for the present application is earnestly solicited.

Respectfully submitted,

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